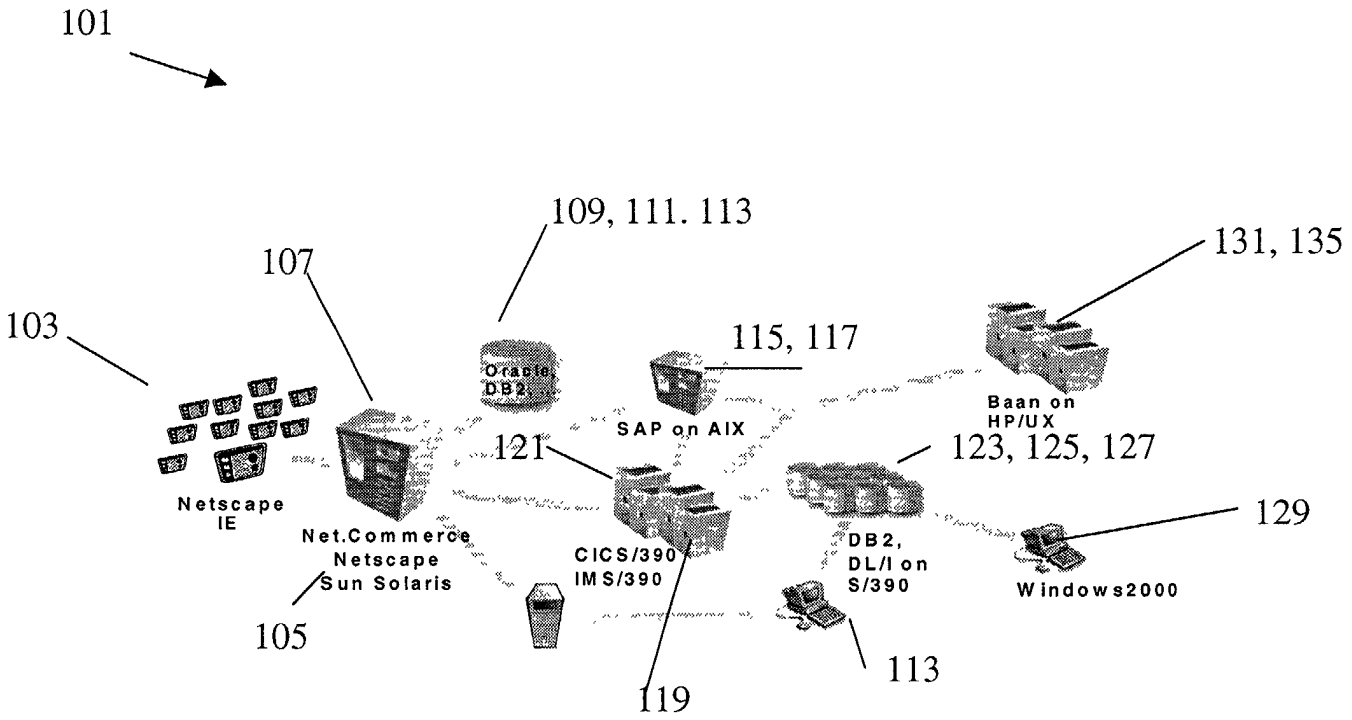
101
109, 111. 113
107
131, 135
103
115, 117
Oracle,
DB2
Baan on
HP/UX
SAP on AIX
121
123, 125, 127
Netscape
IE
129
Net.Commerce
Netscape
Sun Solaris
CICS/390
IMS/390
DB2,
DL/I on
S/390
Windows2000
105
113
119

Figure1

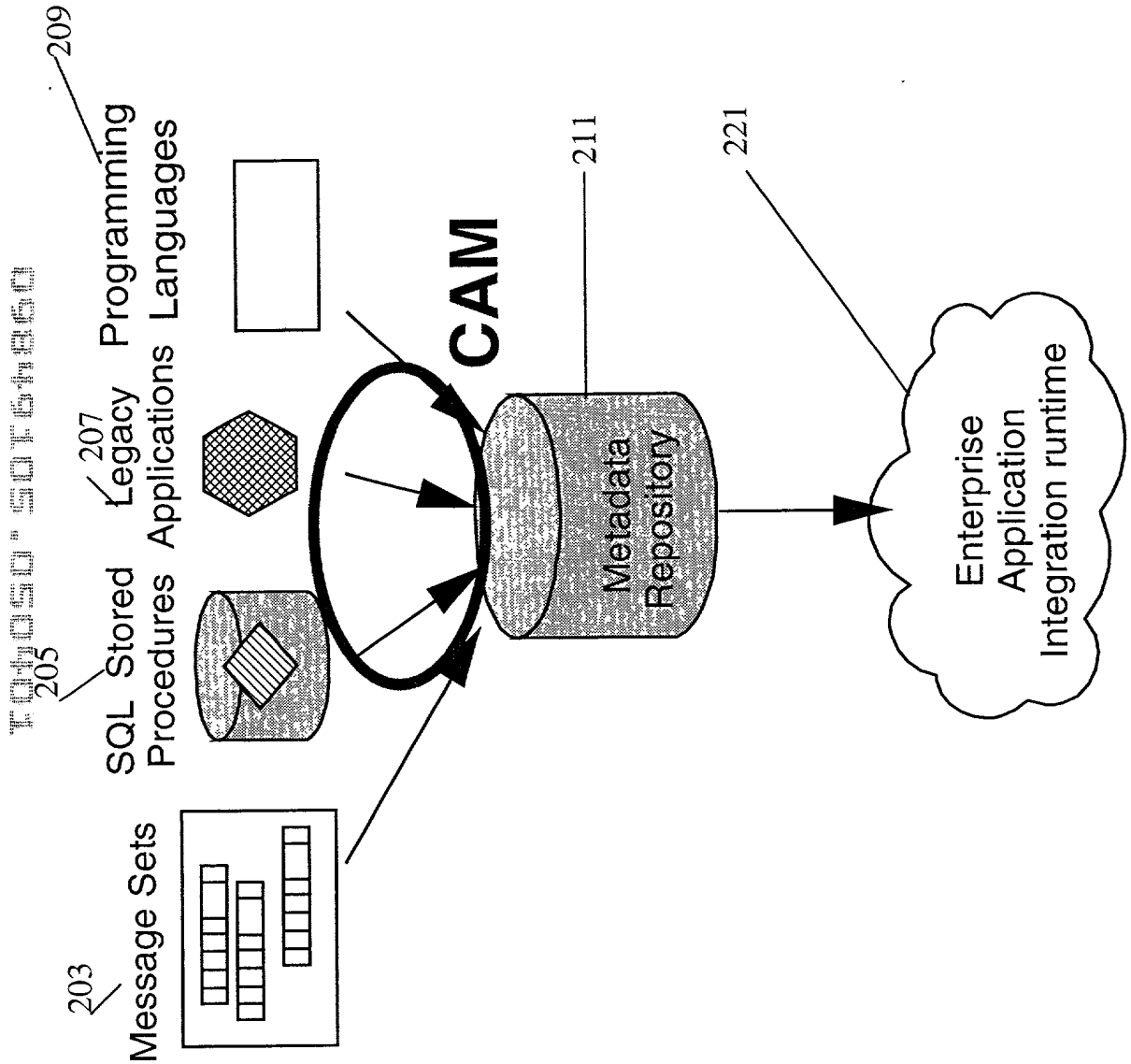
209
205
SQL Stored Procedures
207
Legacy Applications
Programming Languages
CAM
211
Metadata Repository
221
Enterprise Application Integration runtime
203
Message Sets

Figure 2

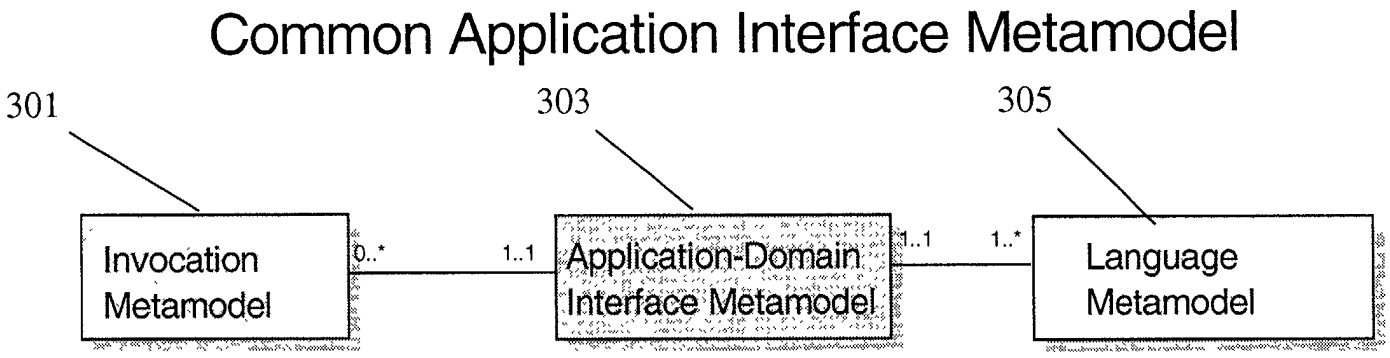
Common Application Interface Metamodel
301
303
305
Invocation Metamodel
0..*
1..1
Application-Domain Interface Metamodel
1..1
1..*
Language Metamodel

Figure 3

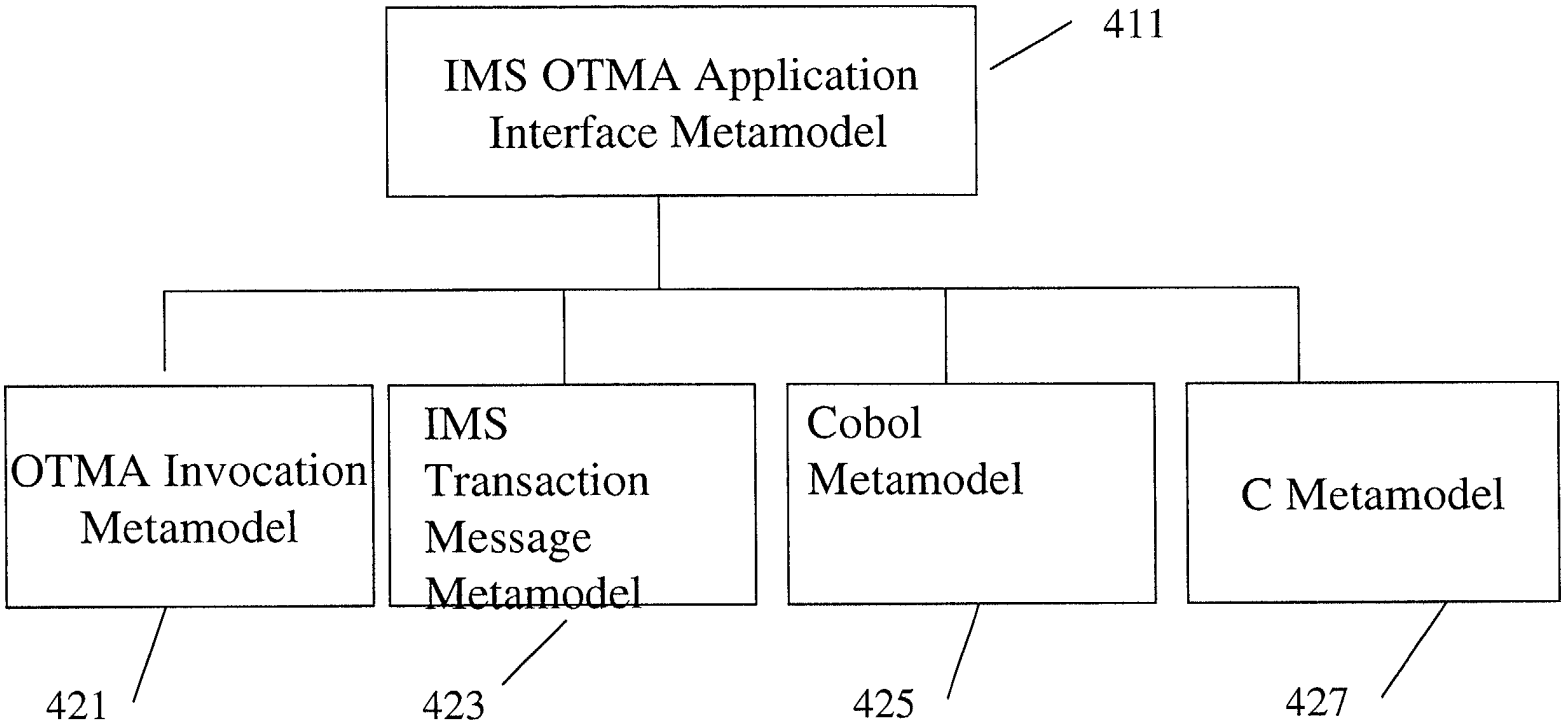
IMS OTMA Application Interface Metamodel
411
OTMA Invocation Metamodel
IMS Transaction Message Metamodel
Cobol Metamodel
C Metamodel
421
423
425
427

Figure 4

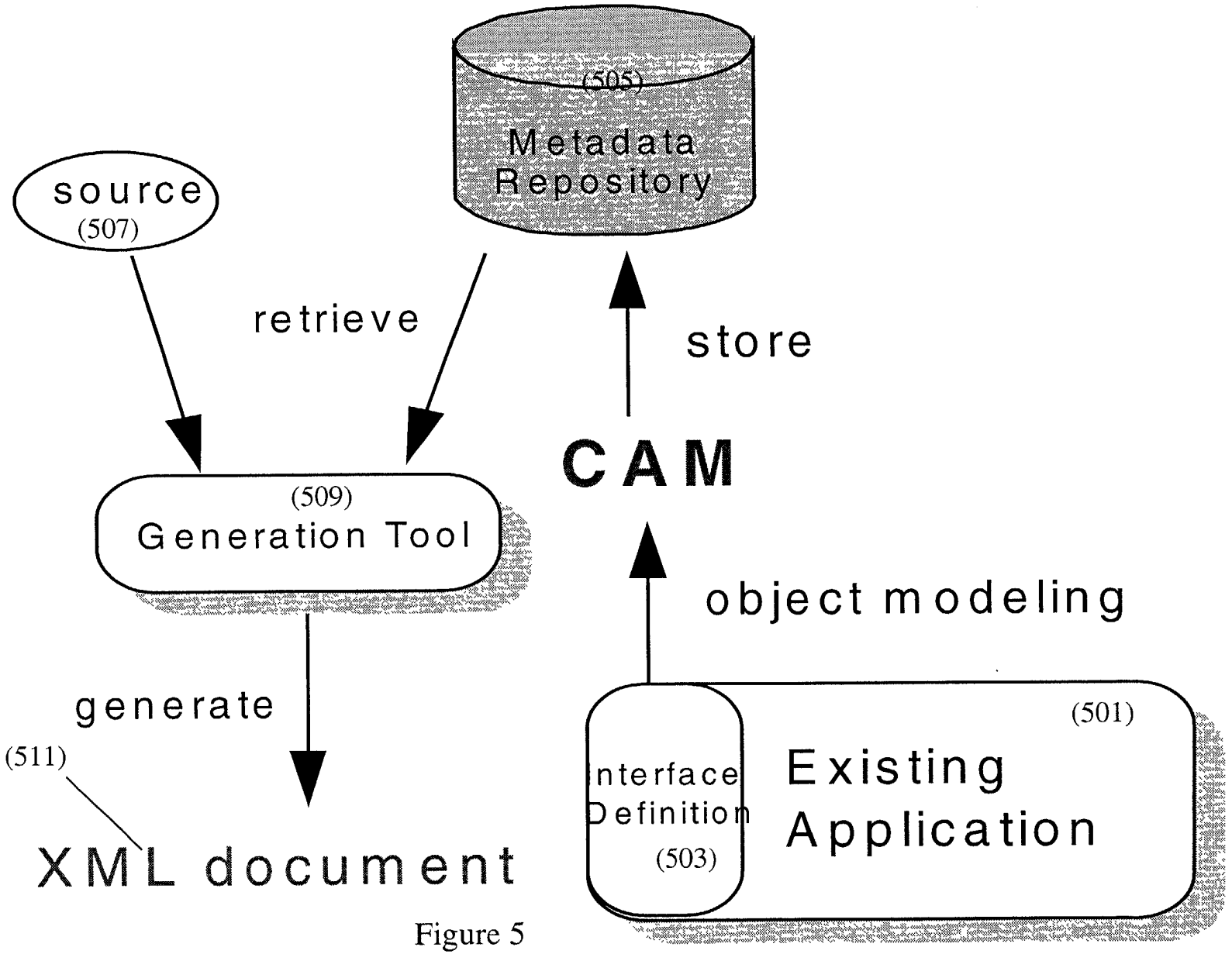
(505)
Metadata Repository
source
(507)
retrieve
store
CAM
(509)
Generation Tool
object modeling
generate
(511)
XML document
(501)
Interface Definition
(503)
Existing Application

Figure 5

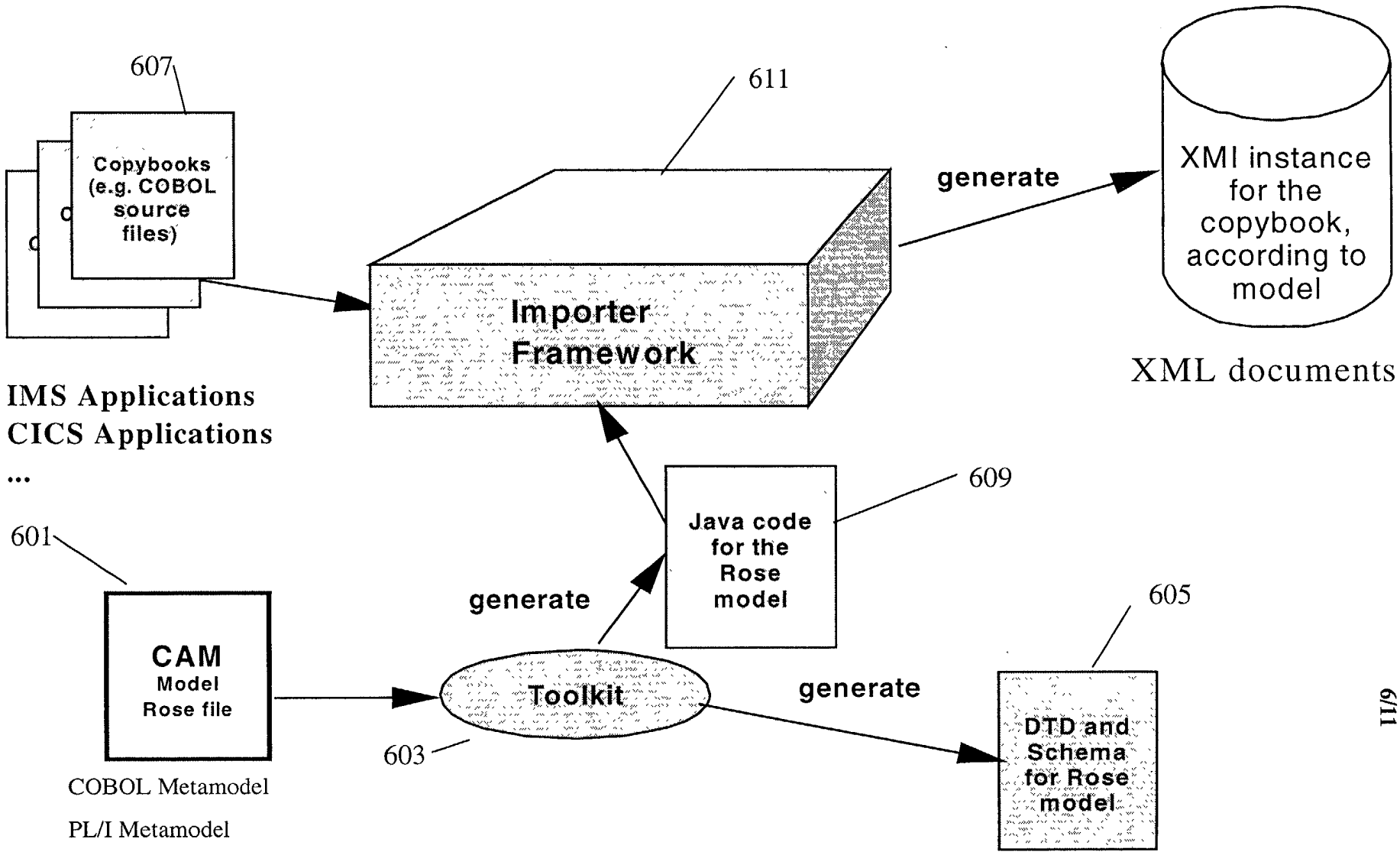
607
Copybooks (e.g. COBOL source files)
611
Importer Framework
generate
XMI instance for the copybook, according to model
XML documents
IMS Applications
CICS Applications
...
609
Java code for the Rose model
601
CAM Model Rose file
generate
605
Toolkit
generate
DTD and Schema for Rose model
603
COBOL Metamodel
PL/I Metamodel
...
MFS Metamodel
BMS Metamodel

Figure 6

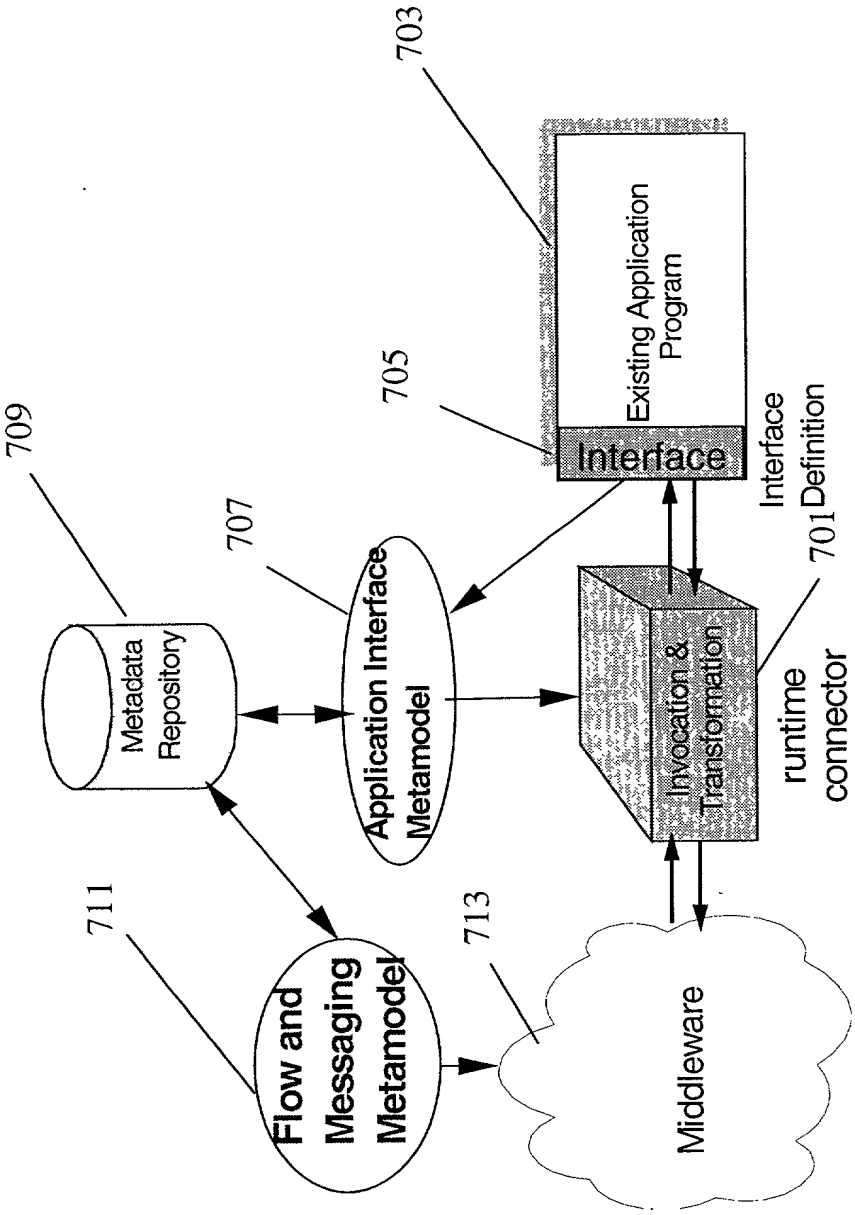
703
Existing Application Program
Interface
705
Interface Definition
701
709
Metadata Repository
707
Application Interface Metamodel
Invocation & Transformation
runtime connector
711
Flow and Messaging Metamodel
713
Middleware

Figure 7

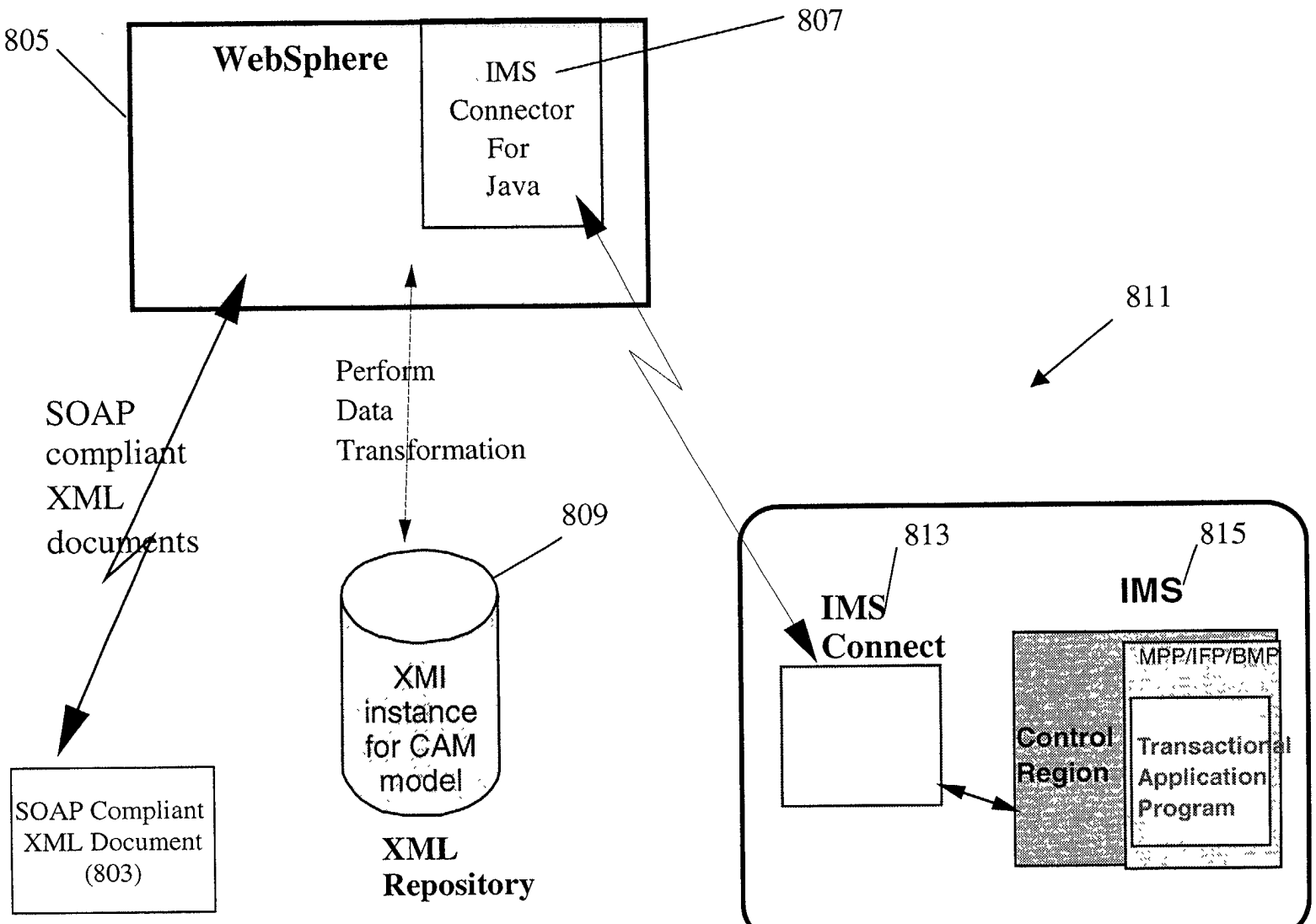
805
WebSphere
807
IMS
Connector
For
Java
811
SOAP
compliant
XML
documents
Perform
Data
Transformation
809
813
815
IMS
Connect
IMS
MPP/IFP/BMP
Control
Region
Transactional
Application
Program
XMI
instance
for CAM
model
SOAP Compliant
XML Document
(803)
XML
Repository

Figure 8

MFSStatement
MFSMessageDescriptor
MFSDeviceDescriptor
MFSTable
MFSIfCondition
MFSLogicalPage
MFSDeviceType
MFSPassword
MFSDeviceDivision
MFSSegment
MFSDevicePage
MFSMessageField
MFSDeviceField

Figure 9

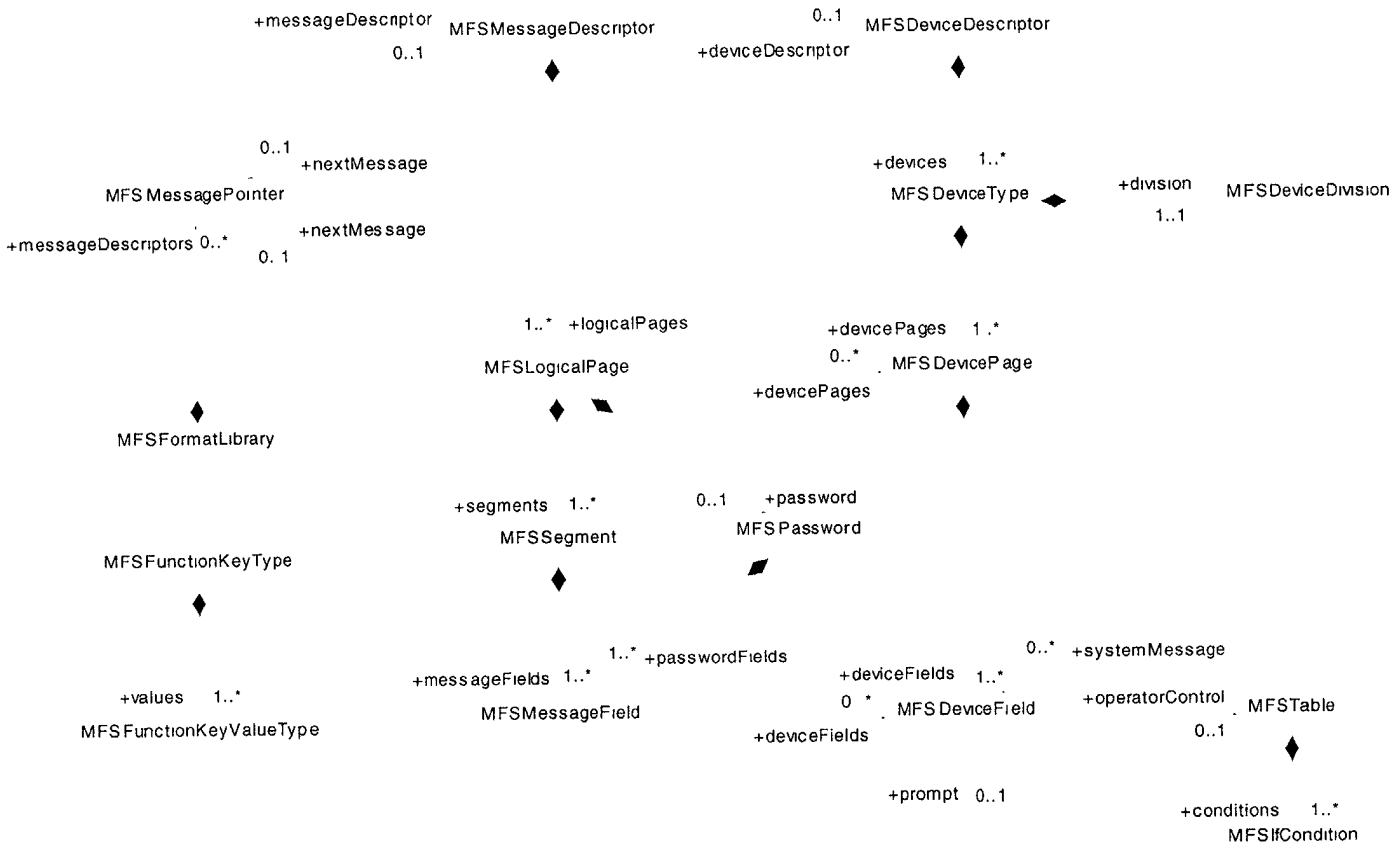
+messageDescriptor
0..1
MFSMessageDescriptor
0..1
+deviceDescriptor
MFSDeviceDescriptor
0..1
+nextMessage
MFSMessagePointer
+messageDescriptors 0..*
+nextMessage
0..1
+devices 1..*
MFSDeviceType
+division
1..1
MFSDeviceDivision
1..* +logicalPages
MFSLogicalPage
+devicePages 1..*
0..*
MFSDevicePage
+devicePages
MFSFormatLibrary
+segments 1..*
MFSSegment
0..1 +password
MFSPassword
MFSFunctionKeyType
+values 1..*
MFSFunctionKeyValueType
1..* +passwordFields
+messageFields 1..*
MFSMessageField
+deviceFields 1..*
0..*
MFSDeviceField
+deviceFields
0..* +systemMessage
+operatorControl
0..1
MFSTable
+prompt 0..1
+conditions 1..*
MFSIfCondition

Figure 10

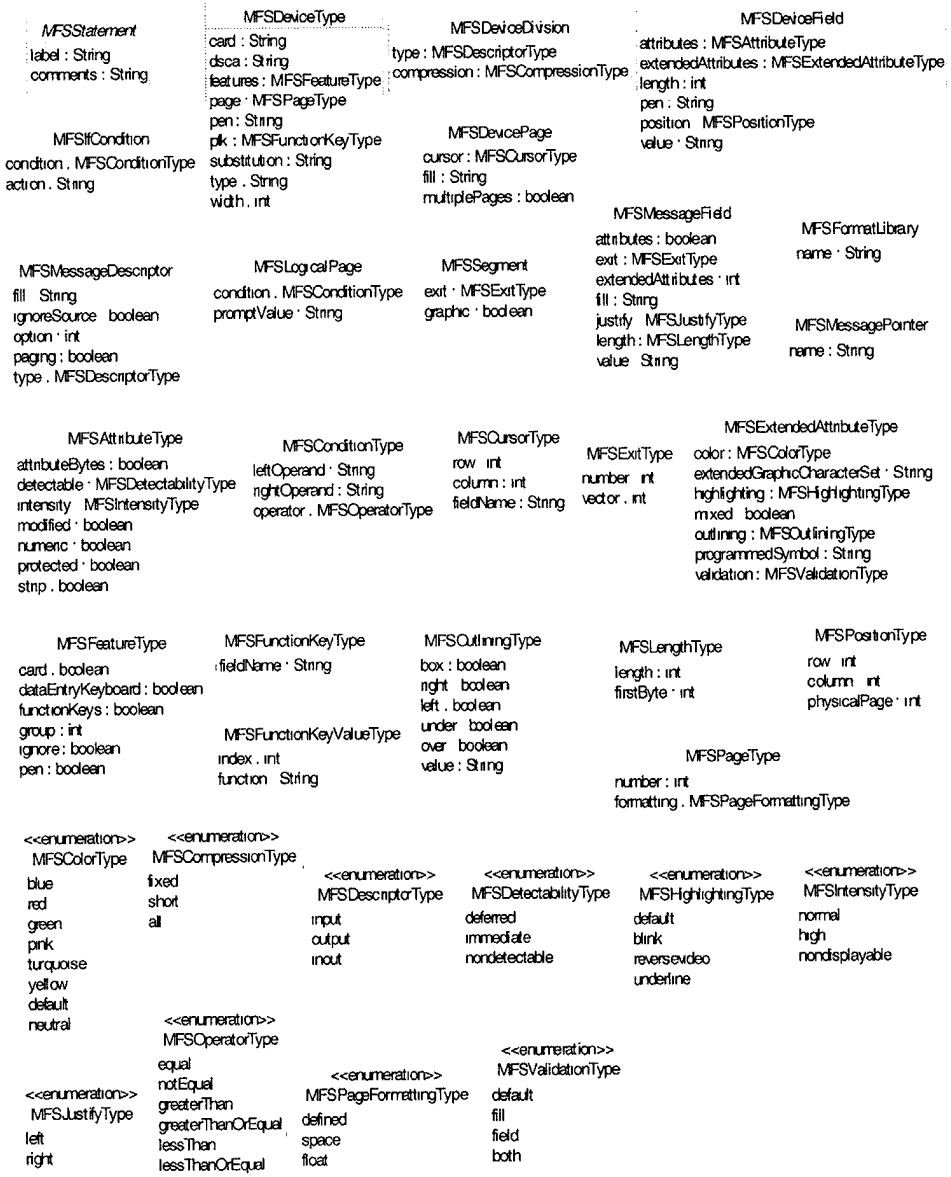
MFSStatement
label : String
comments : String
MFSDeviceType
card : String
dsca : String
features : MFSFeatureType
page : MFSPageType
pen : String
pik : MFSFunctionKeyType
substitution : String
type . String
width . int
MFSDeviceDivision
type : MFSDescriptorType
compression : MFSCompressionType
MFSDeviceField
attributes : MFSAttributeType
extendedAttributes : MFSExtendedAttributeType
length : int
pen . String
position MFSPositionType
value : String
MFSIfCondition
condition . MFSConditionType
action . String
MFSDevicePage
cursor : MFSCursorType
fill : String
multiplePages : boolean
MFSMessageField
attributes : boolean
exit : MFSExitType
extendedAttributes : int
fill : String
justify MFSJustifyType
length : MFSLengthType
value String
MFSFormatLibrary
name : String
MFSMessageDescriptor
fill String
ignoreSource boolean
option : int
paging : boolean
type . MFSDescriptorType
MFSLogicalPage
condition . MFSConditionType
promptValue : String
MFSSegment
exit : MFSExitType
graphic : boolean
MFSMessagePointer
name : String
MFSAttributeType
attributeBytes : boolean
detectable : MFSDetectabilityType
intensity MFSIntensityType
modified : boolean
numeric : boolean
protected : boolean
strip . boolean
MFSConditionType
leftOperand : String
rightOperand : String
operator . MFSOperatorType
MFSCursorType
row int
column : int
fieldName : String
MFSExitType
number int
vector . int
MFSExtendedAttributeType
color : MFSColorType
extendedGraphicCharacterSet : String
highlighting : MFSHighlightingType
mixed boolean
outlining : MFSOutliningType
programmedSymbol : String
validation : MFSValidationType
MFSFeatureType
card . boolean
dataEntryKeyboard : boolean
functionKeys : boolean
group : int
ignore : boolean
pen : boolean
MFSFunctionKeyType
fieldName : String
MFSFunctionKeyValueType
index . int
function String
MFSOutliningType
box : boolean
right boolean
left . boolean
under boolean
over boolean
value : String
MFSLengthType
length : int
firstByte : int
MFSPositionType
row int
column int
physicalPage : int
MFSPageType
number : int
formatting . MFSPageFormattingType
<<enumeration>>
MFSColorType
blue
red
green
pink
turquoise
yellow
default
neutral
<<enumeration>>
MFSCompressionType
fixed
short
all
<<enumeration>>
MFSDescriptorType
input
output
inout
<<enumeration>>
MFSDetectabilityType
deferred
immediate
nondetectable
<<enumeration>>
MFSHighlightingType
default
blink
reversevideo
underline
<<enumeration>>
MFSIntensityType
normal
high
nondisplayable
<<enumeration>>
MFSJustifyType
left
right
<<enumeration>>
MFSOperatorType
equal
notEqual
greaterThan
greaterThanOrEqual
lessThan
lessThanOrEqual
<<enumeration>>
MFSPageFormattingType
defined
space
float
<<enumeration>>
MFSValidationType
default
fill
field
both

Figure 11